

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled)

Claim 2 (previously presented): A method according to Claim 21, and having a data-specific separation, which overcomes an air interface for the purpose of optimal use of frequency resources and to obtain optimal transmission quality of a specific application or individual applications within a multimedia application.

Claim 3 (previously presented): A method according to claim 21, and reassembling the data streams that were separated according to data structure after optimized parallel transmission into the original data streams such that optimization is transparent to the user.

Claim 4 (canceled)

Claim 5 (currently amended): A method according to claim 21, characterized by having the functional unit (CAC) on the user's side as well as the functional unit (ICAMU) on the side of the core network [[are]] designed in their protocol, conversion, and algorithm-specific components preferably as software modules for microprocessors or signal processors in such a way that an update of partial functions as needed or alternatively the complete function via the mobile radio communications network is possible, which thus allows for a permanent method for updating to new methods and protocols.

Claim 6 (previously presented): A method according to claim 21, and providing an optional connection between the network functional unit (ICAMU) and a Customer Care and Billing System (CCBS) of the network operator for the billing of offered services and the creation and verification of use by a single user.

Claim 7 (previously presented): A method according to claim 21, characterized by the functional unit (CAC) on the user's side as well as the functional unit (ICAMU) on the side of the core network communicate with each other by means of inband signaling, such that the needs of an optimized data transfer via various transmission channels between the functional units are met.

Claim 8 (currently amended): A method for the optimized transmission of multimedia services in a mobile communications network, particularly a mobile radio communications network, comprising the steps of:

providing a mobile terminal having a functional unit in the form of a channel access client (CAC) implemented as a software driver on a user's side and a functional unit in the form of an intelligent channel access and management unit (ICAMU) on a core network side for handling a multimedia data stream,

recognizing, in the functional units and depending on the direction of the multimedia data stream, particular applications within the multimedia data stream by means of suitable parameters in form of indicators, descriptors, protocol variations or data analysis processes,

the functional units collaborating with each other to allocate and transmit via various alternative air interface transmission channels of the mobile communications network,

the mobile terminal including said user's side functional unit (CAC) separating by means of software the recognized applications completely or in part by their specific data structure and generating several data streams,

transmitting the several data streams individually and in parallel by their specific data structure via available transmission channels of the mobile communications network which are optimized for respective needs of the individual data streams,

re-assembling the data streams on a receiver side,

optionally not aggregating completely some application-specific components of the data streams,

further transmitting the non-aggregated components at least in part as a separate data stream within the mobile communications network or alternatively via various network accesses to other telecommunication or data networks to other receivers or the same receiver, and

causing the functional unit (ICAMU) on the side of the core network to provide an additional service to the user by optional conversion of the data streams from the user into other standardized multimedia or protocol forms and to transmit them through alternative pathways as needed.

Claim 9 (currently amended): A method for the optimized transmission of multimedia services in a mobile communications network, particularly a mobile radio communications network, comprising the steps of:

providing a mobile terminal having a functional unit in the form of a channel access client (CAC) implemented as a software drive on a user's side and a functional unit in the form of an intelligent channel access and management unit (ICAMU) on a core network side for handling a multimedia data stream,

recognizing, in the functional units and depending on the direction of the multimedia data stream, particular applications within the multimedia data stream by means of suitable parameters in form of indicators, descriptors, protocol variations or data analysis processes,

the functional units collaborating with each other to allocate and transmit via various alternative air interface transmission channels of the mobile communications network,

the mobile terminal including said user's side functional unit CAC separating by means of software the recognized applications completely or in part by their specific data structure and generating several data streams,

transmitting the several data streams individually and in parallel by their specific data structure via available transmission channels of the mobile communications network which are optimized for respective needs of the individual data streams,

re-assembling the data streams on a receiver side,

optionally not aggregating completely some application-specific components of the data streams,

further transmitting the non-aggregated components at least in part as a separate data stream within the mobile communications network or alternatively via various network accesses to other telecommunication or data networks to other receivers or the same receiver, and

causing at least the functional unit (ICAMU) on the side of the core network to handle appropriate routing and signaling mechanisms to transmit application or data structure specific parts of multimedia data streams via various transmission networks.

Claim 10 (previously presented): A method according to claim 21, wherein the method may be used in fixed network systems in like manner as needed.

Claim 11 (previously presented): A method according to claim 21 and enabling a network provider to allocate channels for dynamic load distribution and load optimization of alternative transmission channels and/or various networks.

Claim 12 (previously presented): A method according to claim 21, and enabling the user to use the method for a customer-specific selection and choice method in areas including speed of transmission, services used, priorities, quality of service and costs.

Claim 13 (previously presented): A method according to claim 2, and re-assembling the data streams that were separated according to data structure after optimized parallel transmission into the original data stream such that optimization is transparent to the user.

Claim 14 (canceled)

Claim 15 (previously presented): A method according to claim 2, characterized by having the functional unit (CAC) on the user's side as well as the function unit (ICAMU) on the side of the core network designed in their protocol, conversion, and algorithm-specific components as software modules for microprocessors or signal processors in such a way that an update of partial functions as needed or alternatively the complete function via the mobile radio communications network is possible, which thus allows for a permanent method for updating to new methods and protocols.

Claim 16 (previously presented): A method according to claim 3, characterized by having the functional unit (CAC) on the user's side as well as the function unit (ICAMU) on the side of the core network designed in their protocol, conversion, and algorithm-specific

components as software modules for microprocessors or signal processors in such a way that an update of partial functions as needed or alternatively the complete function via the mobile radio communications network is possible, which thus allows for a permanent method for updating to new methods and protocols.

Claims 17-20 (canceled)

Claim 21 (currently amended): A method for the optimized transmission of multimedia services in a mobile communications network, particularly a mobile radio communications network, comprising the steps of:

providing a mobile terminal having a functional unit in the form of a channel access client (CAC) implemented as a software driver on a user's side and a functional unit in the form of an intelligent channel access and management unit (ICAMU) on a core network side for handling a multimedia data stream,

recognizing, in the functional units and depending on the direction of the multimedia data stream, particular applications within the multimedia data stream by means of suitable parameters in form of indicators, descriptors, protocol variations or data analysis processes,

the functional units collaborating with each other to allocate and transmit via various alternative air interface transmission channels of the mobile communications network,

the mobile terminal including said user's side functional unit CAC separating by means of software the recognized applications completely or in part by their specific data structure and generating several data streams,

transmitting the several data streams individually and in parallel by their specific data structure via available transmission channels of the mobile communications network which are optimized for respective needs of the individual data streams,

re-assembling the data streams on a receiver side,

optionally not aggregating completely in the ICAMU some application-specific components of the data streams, and

further transmitting the non-aggregated components at least in part as a separate data stream within the mobile communications network or alternatively via various network accesses to other telecommunication or data networks to other receivers or the same receiver.